

910
31-50
STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Acting Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION

4300 Cherry Creek Dr. S. 222 S. 6th Street, Room 232
Denver, Colorado 80222-1530 Grand Junction, Colorado 81501-2768
Phone (303) 692-3300 Phone (303) 248-7164
Fax (303) 759-5355 Fax (303) 248-7198

April 11, 1995



Colorado Department
of Public Health
and Environment

Mr. Steven W. Slaten
U.S. Department of Energy
Rocky Flats Environmental Technology Site
Building 116
P. O. Box 928
Golden, Colorado 80402-0928

RE: COMMENTS; Proposed, OU4, Solar Evaporation Ponds, Interim Measure/Interim Remedial Action/Environmental Assessment Decision Document, February, 1995.

Dear Mr. Slaten,

The Colorado Department of Health, Hazardous Materials and Waste Management Division (the Division) has reviewed the subject document as submitted by DOE and prime contractor, EG&G. Our comments are attached. Comments prepared by the U. S. Environmental Protection Agency (EPA) will be submitted directly to DOE and must be addressed to the Division's satisfaction.

The Division has determined that sludge, but not pondcrete, meets the definition of remediation waste as defined under the Corrective Action Management Unit (CAMU) Rule. The date of the Interagency Agreement (IAG), January 22, 1991, is the effective date of a corrective action authority under 6 CCR 1007-3, §265.5 through which the sludge began to be managed for the purpose of implementing corrective actions. Removal and treatment of sludge prior to this date, i.e. pondcrete, did not constitute a corrective action by DOE and may not be dispositioned in a CAMU.

In reviewing the document, the Division began to identify conditions that will be included in the draft Class III permit modification to be prepared by the Division. The attached comments, however, do not identify permit conditions. Today's comments are presented merely to finalize the closure concepts expressed in the IM/IRA/EA DD. It is expected that the Title II Design will meet most permit conditions as envisioned in the IAG, Statement of Work and schedule.

If you have any questions concerning the comments, please contact Harlen Ainscough of my staff at 692-3337.

Sincerely,

Joe Schieffelin, Unit Leader
Rocky Flats Unit
Facilities Section
Hazardous Waste Control Program

Attachment

cc: Daniel S. Miller, AGO
Steve Tarlton, RFP
Martin Hestmark, EPA
Arturo Duran, EPA
Briand Wu, DOE
Andy Ledford, EG&G



I09V0031D50 041195

COMMENTS ON PROPOSED OU 4 SOLAR EVAP P
ENVIRONMENTAL ASSESSMENT DECISION DOCU
STORAGE LOC: DOCDATE:04/11/1995

ADMIN RECORD

1101-A-000289



Colorado Department of Health
Hazardous Materials & Waste Management Division

Comments

on

PROPOSED

OU4 SOLAR EVAPORATION PONDS

INTERIM MEASURE/INTERIM REMEDIAL ACTION

ENVIRONMENTAL ASSESSMENT

DECISION DOCUMENT

U. S. DEPARTMENT OF ENERGY

ROCKY FLATS PLANT

FEBRUARY, 1995

=====

GENERAL COMMENTS:

The comments provided herein constitute follow-ups to informal comments on a "roundtable" review document presented to the Division in February, 1994 and the Draft IM/IRA/EA DD submitted in May 1994. As such, the review of the Proposed IM/IRA/EA DD is intended to verify the incorporation of initial comments, resolve any lingering concerns of the Division, ascertain whether the comments of other parties as incorporated are acceptable, and thus ensure that the document adequately described the proposed action.

On March 24, 1995, the Division requested that additional sampling and analyses be conducted on 4" to 8" layer of salt discovered during the removal of waste from Pond 207-C. This data, along with the Division's analysis of sludge data, is needed to confirm the adequacy of sludge characterization. The Division notes that the IM/IRA/EA DD presents only a summary of the pond sludge characterization data. Consequently, our review and analysis of that data, relative to constituent concentrations and the protectiveness afforded by the proposed cover system, will be conducted outside the time constraints of the 60-day public comment period.

A final determination on site suitability, relative to geotechnical integrity, must be made. To that end, DOE must analyze the seismic data derived from the Phase II RFI/RI investigation for evidence of rotational slumping in bedrock and investigate the occurrence and capability of an inferred fault potentially beneath the 207B series ponds.



2

In reviewing the IM/IRA/EA DD, the Division sought to tentatively identify conditions that will be included in a draft Class III permit modification to incorporate the closure into the RFETS RCRA/CHWA permit. It is anticipated that most conditions will be addressed in the Title II design report as anticipated under the terms of the Interagency Agreement, Statement of Work and schedule. The Division has not attempted to identify any conditions in these comments primarily on the basis that these comments are reserved to finalize the IM/IRA/EA DD and, secondarily, the identification of permit conditions is merely preliminary.

PART I:

Page ES-1: DOE previously and formally indicated its desire to annex IHSS 176; however, the Division has not approved the annexation. Although the Division is agreeable to the annexation, DOE has not indicated to what extent, if needed, the eastern portion of IHSS 176 will be remediated under the OU-4 action. Please do so.

Figure ES-1: Although true on-site disposal was not considered as an option (also see page ES-2, second paragraph), the practical application of the Corrective Action Management Unit rule, as it would be applied to OU-4, is in effect final disposal. Subsequent to issuance of the Proposed IM/IRA/EA DD, the Colorado Department of Public Health and Environment (CDPHE) wrote DOE indicating that on-site disposal is an appropriate alternative to consider. Therefore, Figure ES-1 and the narrative of the Final IM/IRA/EA DD should reflect on-site disposal as a potential alternative.

Introduction: The last paragraph of Page I-2, should include clarification that Unit 24 (Building 964) is covered by an approved closure plan but that the final closure of Unit 24 (concrete slab and soils, if contaminated) will be deferred to the OU-4 schedule and constitute a clean closure of the unit. (Removal of the concrete slab, and any soil contaminated from Unit 24 activities, would in fact be a clean closure of the unit followed by inclusion of the resulting waste in the CAMU.)

Section I.2: On page I-10, as a bulleted item, include evaporator salts from Building 374. These waste were placed in Pond 207-C, at least once, when saltcreting operations in B374 were interrupted.

Section I.2.1.2: In the fourth paragraph, Page I-14, the statement is made that placement of wastes in SEP 207-A ceased and dewatering and sludge removal was initiated in 1986. However, in the last paragraph, Page I-6, states that removal of sludge began on June 19, 1985. Please clarify and amend the text as appropriate.

Section I.2.2: The SEPs are illegal storage units. The SEPs lost interim status on November 8, 1985 (one year after the effective date of HSWA) after failing to certify compliance with applicable

ground water monitoring requirements of Part 265, Sub-part F in a timely manner. Despite this failure to comply, the SEPs remain subject to interim status regulations of 6 CCR 1007-3, Part 265 (§265.1(b)). Please clarify these facts.

Section I.2.2.1: In the fourth paragraph, page I-17, B910 has never routinely processed ITS waters. The use of B910 was limited to hot tests only. Please clarify.

Section I.2.2.2: See previous comment on the Introduction regarding the approved closure plan for Building 964.

Section I.3.1: A public meeting, not public hearing, was held on March 22, 1995. The Division may call a public hearing when the draft permit, relative to this Class III permit modification, is opened to a 45-day public comment period. (DOE took formal comments at the March 22nd meeting; however, this did not constitute a hearing.)

Section I.3.2: In the first paragraph, please indicate the percentage of data validation and the appropriate date. If the data validation process is not yet complete, please specify the date of expected completion.

PART II

Section II.1: The wastes cited in the second paragraph, Page II.1-1, should include salts from the Building 374 evaporator. Please refer to the comment on Part I, Section I.2.

Section II.1.2: In the first paragraph, Page II.1-4, please clarify that drilling beneath Pond 207B-south is not planned (the liner of this pond demonstrated integrity that preclude the need for additional RFI/RI investigation); however, the nature of waste stored in Pond 207-C was such that drilling will be conducted to support the proposed closure action.

Section II.3.5.3: In regard to the first and second paragraphs of this section, page II.3-98, the Division does not believe that sufficient information is available to interpret the "closed contour highs" as slump blocks. A rolling bedrock topographic surface, coupled with erosion of ancestral Walnut Creek could easily account for these two features. Nevertheless, the potential impact of existing or potential slumps should continue to be analyzed from the Phase II seismic data as discussed at the OU-4 Team meeting of March 29, 1995. Additionally, the investigation of an inferred fault, with potential impact on site suitability, should be completed as soon as possible under the Phase II RFI/RI investigation program.

Figure II.4.4-27: There are no data to support an uncontaminated corridor coincident to the PA security fence. Therefore, the two

largest areas should be combined in to one area of contamination. Please check each of the extent of contamination maps for similar problems.

Section II.5.2.2.1: It appears that the statement in the first paragraph, Page II.5-9, "Pu(IV), which exists as Pu(IV)...." should begin with "Plutonium" not "Pu(IV)".

PART III

(Introduction) DOE's interpretation, first paragraph page III-1, that closure of the SEPs should include all types of waste, particularly pondcrete, is incorrect. In regard to pondcrete, DOE clearly took the action to remove waste from a storage unit, treat the waste, and ship the waste to the Nevada Test Site for disposal. The action to remove and treat the sludge continued after NTS stopped accepting mixed waste. Off-site disposal was the closure action of choice implemented by DOE, does not constitute a remediation waste as defined under the Corrective Action Management Unit Rule and is, therefore, not eligible for disposition in a CAMU. (Further clarification of the Division's interpretation of the CAMU rule is being prepared for submittal to DOE.)

Section III.1: The first paragraph of the section states that the closure action is intended to "...disposition the OU-4 sludges, pondcrete, and Buildings 788 and 964 and their ancillary equipment." Clearly, this is DOE's intent whether or not the inclusion of pondcrete is legal. DOE has repeatedly been informed in OU-4 Team meetings that pondcrete is not remediation waste as defined by the CAMU Rule (sludge qualifies as remediation waste). Nevertheless, DOE insisted on taking the issue before the public despite the Division's interpretations. This narrative should be revised to reflect the more restrictive role of unit closures.

Section III.2.3.1: In the second paragraph, the statement is made that COCs may migrate in sufficient quantities to cause ground water criteria to be exceeded. Clarification should be made that this assumes a no action alternative.

Section III.3.3.1: In the first paragraph, page III-73, a statement is made that sludge would remain in the storage tanks under a no-action GRA. DOE is reminded that the sludge is LDR non-compliant waste such that treatment to a Best Demonstrated Available Technology (BDAT) would be necessary for ongoing storage even if the 750 Pad is permitted for storage of liquified waste.

Section III.5.2: In the second paragraph, page III-111, change "development of a hazardous waste management site" to "development of a Corrective Action Management Unit (CAMU) as an on-site response action."

On page III-117 (next to last paragraph), the Hazardous Materials and Waste Management Division, not the Colorado Hazardous Waste Control Commission, may designate a CAMU.

PART IV

Section IV.3.1.3.4: In the second paragraph, Page IV-65, please provide a metric equivalent for the percolation rate of 0.1 inches/year value. This may help facilitate a lay understanding of the interrelationship between the expected rate of percolation through the cover and the rate sufficient to protect ground water. Additionally, clarify that a rate equal to or less than 1×10^{-7} cm/s is the desired threshold needed to provide protection of ground water resources.

Section IV.3.1.4: The second paragraph of the section indicates that soils, liners, processed sludge, etc. will be blended to form a homogeneous material for disposition under the engineered cover. The document does not provide, even in general terms (subject to detailed design under Title II), a discussion on how this will be accomplished. This is an important factor since modeling scenarios are based upon this homogeneity. The Final IM/IRA/EA DD must provide the basic process and be detailed in the Title II design.

Section IV.3.1.5: In the last paragraph of the section, Page IV-67, please clarify that the overall thickness of the drainage layer, not the gravel layer alone, will be 2.5 feet thick.

Section IV.3.2.3: The Division assumes that decontamination of metal sheeting and beams will be conducted at an existing decon station rather than at the site of Building 964. The Division in an OU-4 Team meeting, relative to Building 788, indicated the acceptability of this approach. Please note this intent in this section and verify that Section IV.3.2.2, for the closure of Building 788, contains similar language.

Section IV.5.3: The "Project Milestones" listed should include a date for submittal of a RCRA post closure care and monitoring permit to validate and support the December 99 "Post Closure System Start-up". This will better ensure that the proper administrative process is scheduled.

Section IV.10.7.3: A statement is made in the last paragraph, page IV-173, that the effects of site characteristics (item number 5) cannot be addressed without site specific field data. Of the site characteristics listed, soil composition and thickness, bedrock, water table and topography, which are not available, or not sufficiently available, to determine the effects of earthquakes?

Section IV.11: In the second paragraph, please indicate that CAMU has been adopted by the State.

Section IV.11.1: In the first paragraph, page IV-198, submittal of an actual post closure care and monitoring permit is not required by the Division, and cannot be approved, until the closure is completed. Therefore, DOE's intent to submit an actual post-closure care and monitoring plan (versus part V of this document) prior to closure of the SEPs is inappropriate. However, the Division recognizes the need to place monitoring equipment in the cover at the time of construction rather than retrofit monitoring equipment to the cover and is prepared to act upon that portion of the monitoring plan via the IM/IRA/EA DD approval process.

Section IV.11.4: DOE's position, as stated in the last paragraph of page IV-199, that pondcrete is not considered "new or as generated waste" will not support the inclusion of pondcrete into a CAMU. Pondcrete operations prior to January 22, 1991 were not conducted under a corrective action authority and the resulting pondcrete cannot be defined as remediation waste. The Division will clarify this determination in a subsequent letter.

Table IV.11-2: Relative to paragraph 2.4.7, page IV-208, the "Implementation/Compliance Strategy" states that leachate collection is not needed to prevent contaminant migration to ground water. Be advised that the Part 2 siting requirements do not specify leachate collection. Leachate control, to prevent leachate generation, is acceptable. Please review each paragraph citation of Table IV.11-2 and state that leachate control is provided through the proposed cover system.

Relative to paragraph 2.4.9, please see the comment to Section IV.11.1 regarding the appropriate sequence for submittal of the post-closure care and monitoring plan. Please amend other citations as appropriate.

Relative to citation 2.5.5, the requirement should state the need for "leachate and runoff control" not leachate collection.

Section IV.11.4.2: Although approval of the IM/IRA/EA DD, without change to the CAMU proposal, may be a precursor to designation of a CAMU, actual approval of CAMU would occur upon modification of the facility's permit by the Division. Please remove or modify the statement "With the approval of this decision document, CDPHE approves the CAMU."

Section IV.11.5: As expressed in OU-4 Team meetings, the sludge processing unit does not appear to qualify as a TU. TUs are limited to tanks and containers. Moreover, the preamble to the federal CAMU/TU rule specifically discusses treatment units as more suited to Sub-part X units. The Division will determine, with DOE input, the appropriate permitting mechanism in the process of preparing a draft permit modification for the closure action.

Table IV.11-3: This table, under CAMU Permit Requirement No. 3 (page IV-219) once again indicates that the post-closure care and monitoring permit application will be submitted prior to the closure of the SEPs. Please see the comment to Section IV.11.1.

Appendix IV.F: Under the heading "Crushing and Excavation of Liners from SEPs" (Page IV.F-5), where, and by what methods, will crushing of liners be performed. The process may necessitate additional permitting actions including compliance with air pollution regulations.

Under the heading "Closure of Existing of Underground Utilities" (Page IV.F-6), two possible closure scenarios are discussed, removal or filling with cement. When will DOE determine which approach will be used? Will some pipes be removed while others are sealed? What are the criteria that will be used to determine the actual closure approach?

PART V

Section V.1.2: At the end of the last sentence of this section, page V-3, change the text to read "... indicate a design or construction problem."

Section V.2.1: Relative to a statement in the third paragraph, page V-5, the SEPs lost interim status by failing to comply with Part 265, Sub-part F monitoring requirements in a timely manner. Nevertheless, closure must be conducted under the Part 265 regulations. Please modify the statement to reflect the true legal status of the SEPs. Additionally, the IM/IRA/EA DD is intended to be equivalent to a RCRA/CHWA closure plan. The plan is not the State's plan, it is DOE's closure plan.

Section V.4.2.1: The description of the location of the NPATs, in the first paragraph, is unclear and misleading. The Division suggests, at the minimum, that "at the top of the subsurface drain layer" be deleted. As now described the waste pile would extend vertically into or below the subsurface drainage layer. The NPATs are to be located 2 feet above the top of subsurface drain which will place them 2 feet above the base of the waste pile.

Section V.5.2.4: Relative to monitoring frequency, or future reductions, the Division reserves judgement to a review of the actual post-closure and monitoring permit application following closure of the SEPs.

Section V.5.2.7: As stated in the comment to Section V.2.1, the SEPs previously lost interim status. Please replace the statement about termination of interim status with reference to closure completion or certification of closure.

